

Osteoarthritis (OA):

OA is the most common form of arthritis and the most common joint disease (esp. Knee)

Risk Factors:

-**Age:** over 45 years old (1ry type, while 2ry occurs < 45 yrs)

-**Sex:** more frequently in women than in men

-**Joint alignment:** People with joints that move or fit together incorrectly, such as bow legs, a dislocated hip, or double-jointedness, are more likely to develop OA in those joints

-**Hereditary gene defect** -**Obesity** -**Joint injury or overuse** caused by physical labor or sports

Pathology:

-Osteoarthritis may result from wear and tear on the joint

-The normal cartilage lining is gradually worn away and the underlying bone is exposed

- The repair mechanisms of tissue absorption and synthesis get out of balance and result in osteophyte formation (bone spurs) and bone cysts

Symptoms:

1-Steady or intermittent pain in a joint

2-Stiffness that tends to follow periods of inactivity, such as sleep or sitting

3-Swelling or tenderness in one or more joints

4-Crunching feeling or sound of bone rubbing on bone (called crepitus) when the joint is used

Diagnosis:

1-Radiographic: -Asymmetrical joint space narrowing from loss of articular cartilage

-Periarticular sclerosis -Osteophytes -Sub-chondral bone cysts

2-Arthroscopy: allows earlier diagnosis by demonstrating the more subtle cartilage changes

Management:

-Cannot be cured -Treatment goals: •Limit pain •Increase range of motion •Increase muscle strength

A) Non-operative:

1-Weight reduction 2-Pain medications 3-Physical therapy 4-Walking aids

5-Shock absorption 6-Re-alignment through orthotics 7-Limit strain to affected areas

B) Arthroscopic: (Exam Q)

1-Debridement and Shaving

2-Microfracture and Sub-chondral drilling

3-Mosaicplasty (Cartilage graft transplantation)

C) Proximal Tibial Osteotomy: To correct the genu varum deformity

D) Total Knee Replacement: Usually only considered in people over the age of 60

*Not recommended in younger patients because they are more active and place more stress on the artificial joint, that can lead to loosening and failure earlier

E) Unicompartamental Knee Replacement: replace arthritic part only of the joint

Rheumatoid Arthritis:

-A chronic disease characterized by the inflammation of the lining of the joints

-More common in women than men -Known as an autoimmune disease

Etiology: The exact cause of RA is unknown

Suspected causes are: -Bacterial Infection -Genetic Marker -Stress -Viral Infection

Symptoms:

1-Fatigue 2-Stiffness, especially in early morning and after sitting a long period of time
3-Low Grade Fever, Weakness 4-Muscle pain and pain with prolonged sitting
5-Symmetrical, affects joints on both sides of the body 6-Rheumatoid nodules
7-Deformity of your joints over time

Diagnosis:

1-Clinical History 2-Physical Exams 3-Specific Lab Tests: (CBC-ESR-CRP-RA Factor-Anti CCP)
4-Imaging (X-Ray-MRI-CT Scan-Bone Scan)

Treatment

1-NSAIDs: Aspirin, Ibuprofen, COX-2 inhibitor 2-Corticosteroids
3-DMARDs: Methotrexate, Injectable Gold, Hydroxychloroquine.
4-Biologic Response Modifiers: Enbrel, Remicade, Humira

Gouty Arthritis

↑Uric acid (Overproduction or ↓ excretion) →deposition of uric acid crystals in joint (esp MCP of big toe)

Stages:

A) **Acute:** -Severe & sudden onset of redness, hotness & tenderness that involves one or a few joints
B) **Chronic:** Continuous or persistent over a long period of time

Symptoms:

1-Joint pain: Affects one or more joints: hip, knee, ankle, foot, shoulder, elbow, wrist, hand, or other joints. Great toe, ankle and knee are most common
2-Swelling of Joint: -Stiffness -Warm and red -Possible fever
3-Skin lump (Tophi): which may drain chalky material

Diagnosis: 1-Patient medical history 2-Examination of joint 3-X-rays 4-Arthrocentesis

Treatment:

-Reduce alcohol intake -Increase water intake -Watch diet for food rich in purines
-Colchicine: subsides pain
-Allopurinol: decreases the production of uric acid
-Probenecid and sulfinpurazone: prevent absorption of uric acid in the tubules of kidney

